



A WORD ON GRILLING

There's nothing quite like the visual appeal and the anticipation of the wonderful flavors that grill marks give to any food. The invention of the Weber grill took the nation by storm in the 1950's, and ever since, backyard barbeques have made grilling one of the most popular cooking styles. Many men believe they are born to be grill masters, but this is not the case! Like any other technique, we must look at the science behind the practical application of this cooking method. Let's explore the equipment, fuels, types of grilling, & theory that makes grilling so darn good!

Charcoal Grills

Whether a classic Weber kettle, barrel or table grill, charcoal grills work on the same principle: cooking food over embers. Because of the incomplete combustion of the cooking fuels (wood, lump charcoal, or charcoal briquettes), this method of grilling imparts a good amount of "grill" flavor. Natural woods can be used as fuels (such as hickory, apple, or mesquite). Their natural sap and other components lend to more smoke and thus imparting their flavors in the grilled foods. This type of grilling is a bit tricky because of its unpredictability. The temperature of the coals arches during cooking and there are more "hot" & "cold" spots depending on how evenly the coals were distributed. **Charcoal** is made by heating wood (chunks, chips, or sawdust) at high temperatures in the absence of oxygen turns it into a brittle solid mainly consisting of carbon (a great cooking fuel source). The smoke emitted when it is burned imparts a nice "grill" flavor, but it is not as a consistent heat source as propane. The temperature of the charcoals starts hot, then diminishes during cooking, making it harder to precisely control. **Lump charcoal** is wood that has been burned in a kiln, leaving nothing much more than carbon, which burns much "cleaner" than wood. **Charcoal Briquettes** are usually made from burned sawdust compressed with petroleum-based binders. Not too appealing for a fuel, but there are some brands sold that don't use chemical binders (usually found at natural food stores).

Gas Grills

The convenience and temperature control of gas grills are unmatched by any other style of grill. Due to the almost complete combustion of propane, gas grilling imparts less "grill" flavor to foods. Though this is the case, the same flavors still come though from the sear left by the grill grates due to the high cooking temperatures. This style of grill comes in all shapes, sizes & power ratings. Some of the high-priced fancy grills have the tendency to be too powerful. Once you start getting too far beyond 60,000 Btu's (British thermal units) for an average sized grill, even the low temperature settings are too hot for proper grilling. **Propane gas** (for grills) combusts almost completely, resulting in a nice flame and not much else. There are odorants added to the propane, so that you can smell a gas leak (propane itself has almost no odor). It is a great heat source and has easy adjustability of temperature, which is extremely helpful when trying to cook at an exact temperature. It has a large storage capacity, via the propane storage tank, and it is a steady and long-lasting fuel source. Since it does not produce smoke when it flames, there are no smokey "grill" flavors added to the food.

Types of Grilling

- **Indoor Grilling** is done on a grill pan (a pan with "grill" ridges usually made of cast iron). This type of grill is great for rainy or snowy days, though a true die-hard will brave the elements. The flavors from incomplete combustion aren't achieved, yet the char flavors are attained via the seared grill marks.
- **Direct Grilling** is cooking food relatively quickly, directly over glowing coals or fire, at a hot temperature, usually ranging from 450-700°F. It is great for thinner pieces of proteins and produce.
- **Indirect Grilling** is done by cooking the food over an unlit part of the grill. The heat is usually coming from one or both sides of the food. The foods being grilled cook at a lower temperature and are less likely to burn on the outside. With the lid on, this turns your grill into an outdoor oven. This is perfect for larger pieces of proteins & produce.



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- **Grill Roasting** or grilling with the lid on, which basically turns the grill into an outdoor oven (by trapping the hot moist air in the grill). This is used to grill larger pieces of produce and relatively tender proteins (such as a prime rib roast) that would typically be *roasted* if cooked indoors. Usually done at temperatures between 300-400°F (over indirect heat) to give a gentler, even cooking to the food.
- **Smoking** adds smoke flavor and can be done along with any of the various grilling methods as desired, but it is the unstated law when it comes to true American style barbecue. The most common smoking agents are both hardwoods (such as hickory, mesquite, alder, cherry wood, apple wood, oak, etc.) and hearty whole herb sprigs/stalks (such as thyme, rosemary, sage, lemongrass, etc.). Wood chips are the easiest and most controllable way to add wood smoke flavor. Dried herbs are another fantastic way to impart smokey flavor to grilled foods. Be careful when using smoke, it does impart intense flavor which, if used too much or on mild flavored foods, can become too strong. Using a foil smoking packet helps give a measure of control to the smoking process.

Additional Grilling Gear:

Tongs- grill tongs should be quite long to keep your hand a safe distance from the heat.

Spatula- made of metal; 6-8 inches work well to be able to handle most items.

Grill Brush- ideally one that has thick coarse wire on one side & steel wool on the other.

Wood & Metal Skewers- wood skewers, which should always be soaked in water for about ½ hour before use, are best used for quick cooking foods. Whereas metal skewers should be used for longer cooking items such as kebabs.

Oil Towel- stack about 5-6 paper towels on top of each other, fold in three, roll into a cylinder, & tie closed with kitchen string. Place into a bowl & cover with vegetable oil. Pick up with tongs & use to oil the grill grates.

Chimney Starter- used to start coals; a metal cylinder that hold coals in the top portion and paper (usually old newspaper) in the bottom. Light the paper in the bottom & the starter concentrates the heat & in about 10 minutes you have wonderful burning coals.

Wash Bucket- a small bucket of soapy water kept near the grill used to rinse off dirty tools during grilling.

Considerations when Grilling:

- Beware not to put wet marinated items on the grill without first patting them dry (especially if they are oily). The liquids and fats dipping off onto the fire do not completely combust and give off flavors and sooty smoke coatings to foods.
- For the same reasons above be careful about oily or buttery basting liquids. Be sure to do the basting over an unlit part of the grill.
- To get nice looking grill marks, rotate the food either 45 or 90 degrees.
- When cooking with the lid on a charcoal grill make sure to open the vents to let some air in. Lack of oxygen will kill the fire.
- Make sure not to turn foods until they release themselves from the grill grates. The food will release when the outside is cooked nicely, and grill marks have formed. Remember, patience is a virtue and you will be well rewarded when it comes to mastering the technique of grilling.